

BRC 2001111/14402

The role of women in artisanal fisheries in parts of Lagos State, Nigeria

A. O. Osibona

Department of Zoology, Marine Biology and Fisheries, University of Lagos, Akoka, Lagos, Nigeria

(Received June 21, 2001)

ABSTRACT: The role of women in artisanal fisheries in parts of Lagos State of Nigeria was investigated for six months (July – December, 1998). Women between the ages of 35 and 44 made up 53.6 percent of those actively engaged in artisanal fishery while 35.9 percent and 41.8 percent were involved in processing and marketing respectively. Fishing was mainly done in streams, rivers, pools and lagoons where traditional fishing gears (nets, traps, baskets, hooks and lines) were used. Processing was done using extended drum dryers. Prevalent fish species caught by the women include *Chrysichthys* sp., *Lutjanus agenes*, *Synodontis* sp., *Tilapia* sp., *Pentanemus quinquarius*, *Callinectis amnicola*, *Macrobranchium* sp.; *Clarias* sp., *Gymnachus niloticus*.

Key Words: Fishing; Artisanal fisheries; Women in fisheries.

Introduction

In Nigeria, animal protein is in very short supply hence the need to supplement it with fish protein. Fish protein is rich in essential amino acids such as lysine, leucine, valine and arginine. It is also rich in minerals and vitamins such as thiamine, riboflavin and vitamin A (Clucas, 1996).

Fish is known to be in a fresh state between one and three hours of capture (Aitken *et al.*, 1982). Fresh fish is characterised by firm flesh, intact abdominal wall, no odour, bulging eyes with black, brilliant pupils and iridescent, lustrous skin with transparent mucous (Emokpae, 1978). Unprotected against bacterial and autolytic spoilage, the fish loses the above organoleptic characteristics and becomes progressively more unacceptable for human consumption.

It is estimated that 53 percent of the world's fish harvest is captured by developing nations (FAO, 1985). Unfortunately, most of these catches are lost because of lack of adequate technology to prevent post-harvest losses in the Third World (Osuji, 1976).

The Nigerian women play vital roles as wives and mothers in the household, roles referred to as 'women's special priorities' (Wenneras *et al.*, 1999) which make their academic careers far less brilliant than those of their male peers. Women have therefore become important actors in other fields such as agriculture and fisheries.

Recent studies have revealed that though women make up over half of the world's population and make substantial contributions to national development (Randall, 1985), their efforts have been largely taken for

granted and their needs ignored. This may be due to the fact that the opportunity to voice their needs has not arisen or someone else has answered for them (UNIFEM, 1988).

Until the proclamation of the United Nations Decade for Women in 1975, the concept of development had not favoured women. FAO and other International Organizations have highlighted the role and status of women in the Third World. In the developing world, women in fishing communities contribute a great deal to fishing economy, either directly by harvesting, processing and marketing or indirectly by providing vital extra income, food crops and ensuring the well-being of the family (FAO, 1986). According to Houndekon *et al.* (1990), Okpanefe *et al.* (1991), Bolaji *et al.* (1994), women in the riverine areas alongside the men contribute to the economy by being involved in the traditional fishing diving for oysters, picking of shrimps and crabs.

In the present study we have investigated the age, educational background and marital status of women involved in fishing activities and the actual role played by them in parts of Lagos State of Nigeria.

Materials and Methods

A total of 220 questionnaires were administered and the contents were subjected to constructive validity test in which each item was reviewed to ensure simplicity of language and prevent ambiguity in sentence structuring.

The study covered four Local Government Areas of Lagos State (Badagry, Epe, Ibeju-Lekki and Ikorodu), chosen because of the high concentration of fishing activities in these areas. The data were collected by personal administration of the structured questionnaires. Illiterate respondents were personally assisted by someone who read and interpreted the information to them in their local language. The data obtained were coded manually and analysed by the use of descriptive statistics as described by Egbule (1997).

Results and Discussion

Data on age distribution, marital status, formal education, economic activities, organisms caught and profile of fisherfolks are presented in Tables 1 – 6. Data on fishing areas and gears as well as smoking Kilns are also presented in Table 7 – 9. These data show that 118 (53.64%) of the respondents were between the ages of 35 – 44 years, 85 (38.64%) were between the ages of 45 – 64 years and 17 (7.73%) were between the ages of 15 – 34 years. These observations agree with those of Alamu (1990) who reported that the age range of women in fisheries in the Kainji Lake Basin was between 17 and 41 years. A high percentage of the women were in their prime ages and were, therefore, opportuned to participate actively in fishing activities, even though many of them were nursing mothers. Furthermore, they married early (88%), probably to fishermen (Alamu, 1990) making them align to the family business.

Table 1: Age distribution of respondents in the four Local Government Areas investigated.

Age Range	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
15 – 24	3	–	–	3	6	2.72
25 – 34	5	1	–	5	11	5.00
35 – 44	27	36	13	42	118	53.64
45 – 54	14	13	11	10	48	21.82
55 – 64	1	–	36	–	37	16.82
					220	100.00

Table 2: Marital status of respondents in the four Local Government Areas investigated.

Marital Status	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
Single	4	2	10	9	25	11.36
Married	46	48	50	51	195	88.64
					220	100.00

Table 3: Level of formal education of respondents in the four Local Government Areas investigated.

Education	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
Primary	25					
Secondary	7					
Modern School						
Others						
No Formal Education						
					220	100.00

Table 4: Economic activities of respondents in the four Local Government Areas investigated.

Activity	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
Fishing	22	5	22	–	49	22.27
Fish processing	8	14	25	32	79	35.91
Fish marketing	20	31	13	28	92	41.82
					220	100.00

About 50 percent of the women had no formal education because activities within the artisanal fisheries are often linked by kin and ethnic ties to the fishing communities (Clucas *et al.*, 1996). In these communities there were no nearby schools which the women and their children could attend. The activities in the fisheries sector are usually time consuming and require great attention. For example, during smoking, the women cannot afford to leave the fish on the fire while attending to other functions.

It was observed that 22.27 percent of those actively involved in all sectors of the fisheries were women, with a majority of them engaging in early fishing. This is at variance with the reports of Kusemiju *et al.* (1993) and Ambrose (1997) who reported that fishing is usually done twice in a day, in the morning and at night. During the present investigation, it was observed that none of the women fish at sea, in agreement with the report of FAO (1986) that women are rarely involved in fishing at sea. Women usually fish in rice paddies, shorelines, lakes and pools, streams, rivers and lagoons. Many of them (42.86%) fish in large rivers.

Their catch which includes finfish, crabs and shrimps, is similar to the findings of Duro-Ishola (1982) and Marioghae (1990). The catch of finfish has the highest frequency. Women observed during this study practised subsistence fishing using fishing gear with nets, tarps baskets, hook and line which they can afford to make or buy.

Women, especially in several West African countries, customarily carry out fish processing and marketing. These two sectors provide business opportunities for women. In the four Local Government Areas studied, the processing method adopted involve two types of smoking kilns, the hearth dryer (Agodo Alamo) and the extended drum (Gorodomu). These traditional kilns though rudimentary (Clucas *et al.*, 1996) are convenient, affordable and constructed from local materials such as mud, sticks and stones as well as old 200 L drums probably because they were easy to make and the materials needed were available and did not require a dryer.

Of the total number of women sampled, 41.82 percent were engaged in marketing of fish. This may be an indication that they participated more in marketing than in fishing and processing activities. This finding is in agreement with that of Clucas *et al.* (1996) who stated that women usually participated in artisanal fisheries. Furthermore, in Thailand and in several West African countries, women lead in fish trading (Clucas *et al.*, 1996). The respondents sold both fresh and smoked fish with a majority selling fresh fish probably because of the lack of storage facilities. Moreover, there was the need to deal with fatigue and to quickly dispose of their ware to enable them return to fishing the next day. The low catches may be due to the fact that the gears used were mostly locally made. It is only in exceptional cases when there was no sale that the catches were left till the second day, preserved with ice blocks or stored in deep freezers.

As a result of the contribution of women in the fishery sectors, it may be necessary to pay attention to project design that would ensure that they remain involved and benefit from new technologies. There is also need to improve road transportation to enhance mobility and the fishing communities should be provided social infrastructures.

ACKNOWLEDGEMENTS: The author is grateful to Prof. Dike Nwankwo for reading through the draft of the manuscript and for his useful contribution.

References

- Aitken, A. I. M.; Mackie, J. H. and Windsor, M. L. (1982) Fish Handling and Processing. Ministry of Agriculture, Fisheries and Food Torry Research Station, Bell & Bain Ltd., Glasgow. 192pp.
- Aalmu, S. O. (1990) Assessment of women contributors to fish handling, processing and marketing in Jebba Lake Basin. Annual Report of the National Institute of Freshwater Resource, Nigeria. pp. 164 – 170.
- Ambrose, E. E. (1997) Studies on fishing techniques for Bonga, *Ethmalosa fimbriata*, in Nigerian Inshore Waters. M. Sc. Dissertation, University of Ibadan, Nigeria, 82pp.
- Bolaji, J. U.; Heinbuch and Demuynck, K. (1994) Interrelationships between population growth and development in two fishing communities in Delta State, Nigeria. DANIDA/IDAF, Cotonou.
- Clucas, I. J. and Ward, A. R. (1996) Post-harvest fisheries development: A guide to handling, preservation, processing and quality. Chatham Maritime. 443pp.
- Duro-Ishola, O. (1982) Aspects of the biology of the Lagoon crab, *Callinectes amnicola* (Rath) in the Lagos Lagoon. M. Sc. Dissertation, University of Lagos, Nigeria.

Table 5: Type of organisms caught and processed in the four Local Government Areas of Lagos State.

Scientific Name	Common Name	Local Name
<i>Gymnachus niloticus</i>	Trunk fish	Osan
<i>Chrysichthys nigrodigitatus</i>	Silver catfish	Obokun
<i>Macrobrachium</i> sp.	Prawn	Ede
<i>Panaeus</i> sp.	Prawn	Ede
<i>Tilapia mariae</i>	Cichlid	Epia
<i>Channa obscura</i>	Snake head	Okodo
<i>Trachinotus goreensis</i>	Pompana	Owere
<i>Clarias</i> sp.	Mud catfish	Aro
<i>Lutjanus agenes</i>	Red snapper	Igbakere
<i>Synodontis</i> sp.	Catfish	Akokoniko
<i>Mugil cephalis</i>	Grey mullets	Atoko
<i>Pentanemus quinquarius</i>	Threadfin	Ofon
<i>Callinectes amnicola</i>	Lagoon crab	Akan
<i>Tygon marginata</i>	Ray	Apatamaja
<i>Pseudolithypus</i> sp.	Croaker	Apo

Table 6: Profile of fisher folks.

Reason for fishing	Badagry	Epe	Ibeju-Lekki	Total	%
Family consumption	–	1	–	1	2.04
Family consumption and marketing.	9	1	10	20	40.82
Mostly for marketing	13	3	12	28	57.14
				49	100.00

Table 7: Response to fishing areas.

Fishing areas	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
Streams and small rivers	2	1	2	–	5	10.20
Large rivers	8	1	12	–	21	42.86
Lakes	1	1	2	–	4	8.16
Pools	1	–	1	–	2	4.08
Rice fields	2	–	–	–	2	4.08
Lagoon	3	2	4	–	9	18.37
Sea	–	–	–	–	–	–
Along the shoreline	5	–	1	–	6	12.25
Total					49	100.00

Table 8: Fishing gear used in the four Local Government Areas investigated.

Fishing gear	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
Nets only	2	–	1	–	3	6.12
Nets, Traps and Baskets	–	–	–	–	–	–
Nets, Hook and Line	–	–	–	–	–	–
Nets, Traps and Baskets, Hook, Line	18	5	20	–	43	87.76
Traps and Baskets only	2	–	1	–	3	6.12
Traps and Baskets, Hooks and Lines	–	–	–	–	–	–
Hooks and Lines only	–	–	–	–	–	–
Total					49	100.00

Table 9: Type of smoking kilns used in the four Local Government Areas investigated.

Type of smoking kiln	Badagry	Epe	Ibeju-Lekki	Ikorodu	Total	%
Hearth dryer	15	12	10	10	47	21.36
Extended drum	35	38	50	50	173	78.64
					220	100.00

- Egbule, P. E. (1997) Communication and adoption of improved cassava production technology among rural women in Edo State, Nigeria. Bull. Sci. Assoc. Nig. 21, 53 – 58.
- Emokpae, A. O. (1978) Organoleptic assessment of the quality of fresh fish. NIOMR Occasional Paper, No. 27.
- FAO (1985) Report of the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinji, Yugoslavia, November 1985. FAO Fisheries Report, No. 334, Rome: Food and Agricultural Organisation of the United Nations.
- FAO (1986) Fish processing in Africa. Proceedings of the FAO Expert Consultation on Fish Technology in Africa, Lusaka, Zambia, January 1985. FAO Fisheries Report, No. 329, Rome: Food and Agricultural Organisation of the United Nations.
- Houndekon, B. R.; Templman, D. E. and Ijff, A. M. (1990) Round Table Meeting on Women's Activities and Community Development in Artisanal Fisheries (Projects) in West Africa. Cotonou, Programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF), IDAF/WP/30. 12pp + Annexes.
- Kusemiju, K.; Nwankwo, D. I. and Bamisaye, R. B. (1993) The hydrobiology and fishes of Opofo Channel, Rivers State, Nigeria. J. Sci. Res. Dev. 1, 80 – 87.
- Marioghae, I. E. (1990) Studies on fishing methods, gear and marketing of *Macrobranchium* in the Lagos Area. NIOMR Technical Paper, No. 33. 20pp.
- Okpanefe, M. O.; Abiodun and Haakonsen, J. M. (1991) The fishing communities of the Benin River Estuary Area: Results from a village survey in Bendel State, Nigeria. Cotonou Programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF), IDAF/WP/32. 74pp.
- Osuji, F. N. C. (1977) The influence of traditional handling methods on the quality of processed fish in Nigeria. In: Handling, Processing and Marketing of Tropical Fish. London Tropical Products Institute. pp. 319 – 322.
- Randall, P. E. (1985) Women in Fish Production. FAO Publication, Rome. 22pp.
- UNIFEM (1988) Fish Processing. Food Cycle Technology Resource Book, No. 4. Rugby, U.K. UNIFEM/ITDG. 65pp.
- Wenneras, C. and Wold, A. (1999) Taking a gender tiger by the tail. Nature (Reviews) 399, 747 – 748.